

Talk given at National Symposium on Genetics and the Law,  
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IN HIS EXCITING IF CONTROVERSIAL BOOK CHANCE AND NECESSITY, JACQUES MONOD SUGGESTED THAT AN IMPORTANT SOURCE OF ETHICAL VALUES WAS WHAT HE CALLED THE "ETHICS OF KNOWLEDGE," THAT IS, THE COMMITMENT TO THE SCIENTIFIC EXPLORATION OF NATURAL PHENOMENA. THIS SUGGESTION WAS MADE WITHIN THE INTELLECTUAL FRAMEWORK OF AN EXISTENTIAL ETHICS THAT DENIES THE EXISTENCE OF ABSOLUTE, ULTIMATE VALUES. IN THIS FRAMEWORK, VALUES ARE NOT GIVEN BUT CHOSEN, PARTLY CONSCIOUSLY, PARTLY UNCONSCIOUSLY, AND ARE ADHERED TO OR MODIFIED OR ABANDONED IN THE CONTINUING EFFORT OF EACH INDIVIDUAL TO CREATE A MORAL IDENTITY -- WHAT WE MAY CALL A MORAL SELF. IN THIS LIGHT, THE ETHICS OF KNOWLEDGE IS THE COMMITMENT TO FACE FACTUAL REALITY AS INTELLIGENTLY AS POSSIBLE -- ESSENTIALLY, THE VALUE OF INTELLECTUAL INTEGRITY.

MONOD'S FORMULATION HAS GIVEN RISE TO SEVERAL KINDS OF MISUNDERSTANDINGS. ON THE ONE HAND, THE ETHICS OF KNOWLEDGE HAS BEEN INTERPRETED BY SOME AS THE PROPOSAL OF AN ABSOLUTE SET OF VALUES, LIKE THE REVELATION OF THE DECALOGUE OR THE PROMULGATION OF A PENAL CODE. IT HAS BEEN SEEN AS A CLAIM OF THE PRIORITY OF SCIENTIFIC KNOWLEDGE OVER OTHER TYPES OF HUMAN ACTIVITIES, WHICH ALSO SERVE AS SOURCES OF VALUES. AS SUCH, THE IDEA OF AN ETHICS OF KNOWLEDGE HAS BEEN CRITICIZED AS A MANIFESTATION OF A SCIENTIFIC ELITISM.

MORE DANGEROUSLY, THE ETHICS OF KNOWLEDGE IS OFTEN EMBRACED BY SOME WHO INTERPRET IT AS THE RIGHT TO PURSUE THE QUEST FOR KNOWLEDGE WHENEVER ONE SO WISHES, IRRESPECTIVE OF CONSEQUENCES. WE ARE ALL FAMILIAR WITH THE ABUSES OF THIS PRINCIPLE IN A VARIETY OF AREAS, FROM POINTLESS RESEARCH ON PHONY SUBJECTS TO RESEARCH IN CONTROVERSIAL FIELDS OF SOCIAL AND MEDICAL SCIENCE.

THUS, FOR EXAMPLE, THE BELIEVERS IN EXTRASENSORY PERCEPTION OR TELEPATHY INSIST ON THEIR RIGHT TO BE FUNDED FOR THEIR MEANINGLESS RESEARCH ON NON-EXISTENT PHENOMENA IN THEIR FIELD OF UNREALITY. MORE SERIOUSLY, IT WAS SUFFICIENT FOR SOME SELF-STYLED EDUCATIONAL GENETICIST TO ASSERT THAT THE LOWER MEAN I.Q. SCORES OF BLACK YOUNGSTERS ARE GENETICALLY DETERMINED, FOR A WHOLE PACK OF RACISTS AND INTELLECTUAL PROFITEERS TO GENERATE A BANDWAGON OF SO-CALLED GENETIC RESEARCH ON RACE DIFFERENCES IN INTELLIGENCE. THE RIGHT-TO-KNOWLEDGE BECOMES THE ANALOGUE OF THE RIGHT-TO-LIFE: THE RIGHT TO AFFECT AND POSSIBLY BLIGHT THE LIFE OF OTHERS FOR THE SATISFACTION OF BEING PROVED RIGHT. IF ONE POINTS OUT THAT BEFORE DRAWING CONCLUSIONS FROM MEASUREMENTS OF I.Q. TESTS ONE SHOULD KNOW WHAT IT IS THAT THE TESTS MEASURE, AND WHETHER GENETIC ANALYSIS CAN BE <sup>DONE ON</sup> ~~DRAWN FROM~~ SUCH DATA, ONE IS ACCUSED OF WANTING TO SUPPRESS THE PURSUIT OF KNOWLEDGE. MORE IMPORTANT STILL, THE EXPECTATION THAT

DOING AND ADVERTISING THIS KIND OF "RESEARCH" WILL HAVE SERIOUS SOCIAL CONSEQUENCES, IRRESPECTIVE OF ITS FINDINGS, IS DISCOUNTED AS IRRELEVANT BY THE CHAMPIONS OF THE RIGHT-TO-KNOW.

ANOTHER EXAMPLE IS THE XYY STORY. INITIAL OBSERVATIONS OF A SIGNIFICANTLY HIGH INCIDENCE OF THIS CHROMOSOMAL ANOMALY AMONG PRISON INMATES QUICKLY BECOME INCORPORATED INTO SORDID TALES OF A "CRIME CHROMOSOME." DESPITE SOLID EVIDENCE CONTRARY TO THE EXISTENCE OF A CORRELATION BETWEEN CRIME AND THE EXTRA Y, RESEARCH PROJECTS HAVE PROLIFERATED, SOME PROBABLY INNOCUOUS, OTHERS SCIENTIFICALLY MEANINGLESS, OTHERS MEDICALLY AND SOCIALLY QUESTIONABLE, BECAUSE THEIR PERFORMANCE CAN CREATE MEDICAL PROBLEMS WHERE NONE WAS PRESENT. THE RIGHT-TO-KNOW ATTRACTS RESEARCH FUNDS.

WHAT IS WRONG WITH THE CLAIM OF AN UNFETTERED RIGHT-TO-KNOW, WHETHER IN THE SOCIAL OR THE MEDICAL RESEARCH FIELD? I BELIEVE THAT THE MAIN PITFALL IS THE FAILURE TO BALANCE THE RIGHT-TO-KNOW VALUE, THAT IS, THE ETHICS OF KNOWLEDGE, WITH WHAT I SHALL CALL THE ETHICS OF INNOCENCE. WHAT I MEAN BY THE ETHICS OF INNOCENCE CAN BEST BE STATED METAPHORICALLY BY THE WORDS THAT DOSTOEVSKI PUT IN THE MOUTH OF IVAN KARAMAZOV: "IF THE SUFFERING OF CHILDREN SERVES TO COMPLETE THE SUM OF SUFFERING NECESSARY FOR THE ACQUISITION OF TRUTH, I AFFIRM THAT TRUTH IS NOT WORTH SUCH A PRICE."

WHAT THIS MEANS IS SIMPLY THAT MORALITY DOES NOT EXIST IN A VACUUM, AND THAT HUMAN PURSUITS SHOULD ALWAYS BE JUDGED IN TERMS OF WHAT THEIR CONSEQUENCES ARE FOR OTHER HUMAN BEINGS. VALUES ARE ONLY NORMS FOR HUMAN INTERACTION. IF THE ETHICS OF KNOWLEDGE URGES US TO STRIVE TO ADD NEW KNOWLEDGE TO THE INTELLECTUAL PATRIMONY OF MANKIND, THE ETHICS OF INNOCENCE PRESCRIBES THAT WE MUST REFRAIN FROM DOING ANYTHING THAT HAS A FORESEEABLE CHANCE TO CAUSE SUFFERING. THE PRINCIPLE OF NOT INFLECTING DAMAGE OR UNNECESSARY PAIN ONTO PATIENTS OR EXPERIMENTAL SUBJECTS IS WELL ESTABLISHED IN MEDICAL PRACTICE AND RESEARCH. BUT THE ISSUES RAISED BY BIOLOGICAL RESEARCH IN THE SOCIAL SCIENCE FIELD ARE MORE SUBTLE. DAMAGE CAN BE DONE INDIRECTLY, THROUGH THE FUNCTIONING OF SOCIAL FORCES AND INSTITUTIONS.

IF A SINGLE PERSON, BLACK OR WHITE OR YELLOW, SHOULD SUFFER BECAUSE OF THE SOCIAL CONSEQUENCES OF THE RIGHT CLAIMED BY JENSEN OR HERNSTEIN TO FIND OUT WHAT A 15-POINT MEAN DIFFERENCE IN I.Q. REALLY MEANS, THEN I WOULD SAY, LET US FORSAKE THAT KNOWLEDGE. THAT TRUTH IS NOT WORTH SUCH PRICE.

IF A SINGLE XYY CHILD OR ITS PARENTS SHOULD HAVE THEIR LIFE BLIGHTED OR ANGUISHED BECAUSE OF THE WISH OF SOME PSYCHIATRIST TO KNOW THE TRUE FACTS ABOUT THE PSYCHOLOGICAL

EFFECTS OF THE XYY PATTERN, AGAIN I WOULD SAY, THAT TRUTH IS NOT WORTH SUCH PRICE. KNOWLEDGE GAINED AT SUCH PRICE IS NOT LIKE THE DIAGNOSTIC KNOWLEDGE GAINED BY A PHYSICIAN THROUGH THE INEVITABLE INFLECTION OF SOME PAIN TO A PATIENT UNDER TREATMENT, OR BY A RESEARCHER THROUGH EXPERIMENTATION ON INFORMED HUMAN VOLUNTEERS.

THE ETHICS OF KNOWLEDGE AND THE ETHICS OF INNOCENCE ARE TWO COMPLEMENTARY ASPECTS OF MORALITY. BOTH ARE EXPRESSIONS OF THE UNIQUE BIOLOGICAL DESTINY OF HUMANKIND. THE DEVELOPMENT OF THE HUMAN BRAIN AND THE ACQUISITION OF CONSCIOUSNESS IN THE COURSE OF EVOLUTION HAVE GIVEN <sup>TO US</sup> HUMAN BEINGS THE POWER TO ORGANIZE AND TRANSMIT KNOWLEDGE, AS WELL AS THE POWER TO IDENTIFY OURSELVES WITH THE FEELINGS AND THE SUFFERINGS OF OTHER HUMAN BEINGS. THEY HAVE FORCED UPON US THE NEED TO KNOW AND THE NEED TO BE INNOCENT, BOTH OF THEM BIOLOGICALLY ROOTED VALUES. WE CANNOT LEGITIMATELY FOLLOW EITHER ONE AND IGNORE THE OTHER.

ONE MORE POINT MAY BE WORTH EMPHASIZING. WHENEVER THE RIGHT-TO-KNOW IS CLAIMED TO SUPERSEDE THE OBLIGATION OF INNOCENCE, WE SHOULD SUSPECT BEHIND THAT CLAIM SOME FORM OF OBSCURANTISM AND OPPRESSION -- THAT IS, THE DENIAL OF INNOCENCE. BEHIND THE I.Q. PROPAGANDA ARE LINED THE FORCES OF THAT RACISM THAT IS UNFORTUNATELY EMBEDDED IN THE CULTURAL AND LEGAL TRADITION OF AMERICA. FIFTY YEARS AGO,

THE POWERS OF GENETICS WERE ENLISTED BY THE FORCES OF SOCIAL OPPRESSION TO PROVE THAT PELLAGRA, <sup>THEN</sup> PREVALENT AMONG THE SOUTHERN POOR, WAS A SYNDROME OF THE GENETICALLY INFERIOR RATHER THAN A NUTRITIONAL DEFICIENCY OF THE EXPLOITED. NOW GENETICS IS ONCE MORE BEING INVOKED -- FORTUNATELY NOT BY ANY COMPETENT GENETICIST -- IN THE SERVICE OF RACIAL PREJUDICE.

IN A SIMILAR WAY, BEHIND THE XYY FUSS THERE LOOMS THE CRIME-ORIENTED PARADIGM OF THE LAW-ENFORCEMENT AGENCIES, A PARADIGM THAT HAS ALREADY SUCCEEDED IN MAKING A CRIMINAL OF EVERY ADDICT AND WOULD LIKE TO MAKE EVERY SOCIAL DEVIANT OR POLITICAL REBEL INTO A GENETICALLY PROGRAMMED CRIMINAL.

TO PRESERVE THE VALUES THAT WE CHERISH, IN SCIENCE AS IN MEDICINE, WE MUST BE CAREFUL NEVER TO BECOME, CONSCIOUSLY OR UNWITTINGLY, THE INSTRUMENTS OF FORCES THAT WOULD SUBORDINATE THOSE VALUES FOR SELFISH OR MISGUIDED GOALS OF THEIR OWN. ETHICS OF KNOWLEDGE AND ETHICS OF INNOCENCE MUST NEVER BECOME DISSOCIATED, LEST EITHER ONE WITHOUT THE OTHER BECOMES A VEHICLE FOR IGNORANCE OR A TOOL OF OPPRESSION.